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**EXPLANATORY NOTE FOR A DRAFT RECOMMENDATION BY ICCAT TO ESTABLISH  
A PLAN TO REBUILD NORTH ATLANTIC SHORTFIN MAKO SHARKS CAUGHT  
IN ASSOCIATION WITH ICCAT FISHERIES**

*(Submitted by the United States)*

The Commission has a history of adopting management measures for shark species caught in association with fisheries managed by ICCAT and considered vulnerable to overfishing, and has adopted a number of measures on shark conservation, including the *Resolution by ICCAT on Atlantic Sharks* (Res. 01-11), the *Recommendation by ICCAT Concerning the Conservation of Sharks Caught in Association with Fisheries Managed by ICCAT* (Rec. 04-10), and the *Supplemental Recommendation by ICCAT concerning Sharks* (Rec. 07-06), including the obligation of CPCs to annually report Task I and II data for sharks in accordance with ICCAT data reporting procedures.

The 2017 stock assessment for North Atlantic shortfin mako sharks found that there is a 90% probability of the stock being overfished and experiencing overfishing. The SCRS has recommended that to stop overfishing and start rebuilding, the constant annual catch should be reduced to 500 t or less. At this catch level, the probability of stopping overfishing in 2018 is 75 percent.

The first phase of the attached U.S. proposal focuses on ending overfishing in 2018. In order to reduce catches to 500 t, the retention of all North Atlantic shortfin mako sharks is prohibited unless: (a) shortfin mako sharks are dead at haulback or (b) they exceed a minimum size limit as specified below. Management measures requiring the release of all live North Atlantic shortfin mako are expected to substantially reduce mortality, as post-release survival can reach 70 percent for this species. Setting a minimum size for retention of shortfin mako sharks would also result in reductions in mortality as the SCRS noted that fishing fleets are mostly catching immature sharks. A minimum size based on age at maturity would give sharks a chance to reproduce. Size at 50 percent maturity for shortfin mako sharks is estimated to be 180 cm fork length for males and 210 cm fork length for females.<sup>1</sup>

In its 2017 report, the SCRS also provided advice that, should the Commission wish to achieve the rebuilding of this stock by 2040 (one mean generation time), the most effective immediate measure is a complete prohibition of retention. Other actions are recommended that can potentially further reduce incidental mortality. The focus of the second phase of the U.S. proposal is the development of a rebuilding program for North Atlantic shortfin mako that has a high probability of rebuilding the stock to  $B_{MSY}$ . The proposal seeks additional information from the SCRS by 2019 to assist the Commission in selecting a rebuilding timeframe that is longer than one mean generation time, taking into account the biology of this species (which is long-lived, slow-growing, and slow to reproduce).

The SCRS emphasized that the sharp reductions in catches required in light of the 2017 stock assessment will mean that CPCs will need to strengthen their monitoring and data collection efforts to monitor the future status of this stock, including but not limited to total extrapolated dead discards and the estimation of CPUE using observer data. Under Rec. 16-14, CPCs are already required to report to the SCRS each year information collected through domestic observer programs, in particular for stock assessment and other scientific purposes, using the designated electronic formats developed by the SCRS (currently form ST09-NatObPro). However, according to PLE-105, only 15 CPCs reported observer data in 2017. Compliance with existing shark data reporting requirements, as well as reporting estimates of total weight of dead discards that have been properly extrapolated to a CPC's entire fleet, will be essential to support future stock assessments.

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<sup>1</sup> Maia A., N. Queiroz, H.N. Cabral, A.M. Santos, and J.P. Correia. 2007. Reproductive biology and population dynamics of the shortfin mako, *Isurus oxyrinchus* Rafinesque, 1810, off the southwest Portuguese coast, eastern North Atlantic. *Journal of Applied Ichthyology* 23:246-251.

**RECOMMENDATION BY ICCAT TO ESTABLISH A PLAN TO REBUILD  
NORTH ATLANTIC SHORTFIN MAKO SHARKS  
CAUGHT IN ASSOCIATION WITH ICCAT FISHERIES**

*(Proposal by the United States)*

*RECOGNIZING* that shortfin mako sharks are primarily caught in association with ICCAT fisheries and that the Commission has adopted management measures for shark species considered vulnerable to overfishing in ICCAT fisheries;

*NOTING* that the 2017 assessment found that there is a 90% probability of the North Atlantic shortfin mako stock being overfished and experiencing overfishing;

*CONSIDERING* that the *Recommendation by ICCAT on the Principles of Decision Making for ICCAT Conservation and Management Measures* (Rec. 11-13) calls for the Commission to immediately adopt management measures, taking into account, *inter alia*, the biology of the stock and SCRS advice, designed to result in a high probability of ending overfishing in as short a period as possible;

*FURTHER NOTING* that a TAC of 500 t has a high probability of ending overfishing in 2018;

*CONSIDERING FURTHER* that Rec. 11-13 calls for the Commission to adopt a plan to rebuild stocks in the red zone of the Kobe plot, taking into account, *inter alia*, the biology of the stock and SCRS advice;

*ACKNOWLEDGING* the need for immediate action to reduce fishing mortality through regulatory measures that end overfishing, and the need to establish a rebuilding program for the North Atlantic shortfin mako stock;

*ALSO RECOGNIZING* SCRS advice on the need for CPCs to strengthen their monitoring and data collection efforts in support of future stock assessments, including but not limited to total estimated dead discards and the estimation of CPUE using observer data; and

*RECALLING* the *Recommendation by ICCAT to Establish Minimum Standards for Fishing Vessel Scientific Observer Programs* (Rec. 16-14).

**THE INTERNATIONAL COMMISSION FOR THE  
CONSERVATION OF ATLANTIC TUNAS (ICCAT) RECOMMENDS THAT:**

1. A two-phase program shall be implemented to end overfishing and rebuild North Atlantic shortfin mako (*Isurus oxyrinchus*) to biomass levels sufficient to support MSY. The provisions of this Recommendation apply to North Atlantic shortfin mako sharks caught in association with ICCAT fisheries.

**Phase 1**

2. Contracting Parties and Cooperating non-Contracting Parties, Entities or Fishing Entities (hereafter referred to as CPCs) shall require fishing vessels flying their flag to release all North Atlantic shortfin mako sharks whether dead or alive, and prohibit retaining on board, transshipping, or landing any part or whole carcass of North Atlantic shortfin mako.
3. North Atlantic shortfin mako that are live at haulback shall be promptly released following safe handling and release practices to maximize survival, giving due consideration to the safety of crew members.
4. Notwithstanding the provisions in paragraphs 2 and 3 above, CPCs may authorize their vessels to retain onboard, transship or land North Atlantic shortfin mako if:
  - a. the shark is dead at haulback, and the vessel has an observer or electronic monitoring system on board to verify the condition of the shark; or

- b. a CPC's domestic law requires a minimum size of at least 180 cm fork length for males and of at least 210 cm fork length for females, is implemented; or
  - c. a CPC's domestic law includes a prohibition against North Atlantic shortfin mako fisheries and requires that all dead fish be landed and that the fishermen shall not draw any profit from such fish.
5. In order to end overfishing, CPCs shall take or maintain the measures specified in paragraphs 2, 3 and 4 to ensure that the total combined catches of North Atlantic shortfin mako sharks by all CPCs (including dead discards) do not exceed 500 t per year in 2018 and in 2019.
  6. In accordance with ICCAT reporting requirements, CPCs shall report estimates of total weight of North Atlantic shortfin mako dead discards that have been extrapolated to the total fishing effort of their relevant fleets using data collected through observer programs or other relevant data collection programs.
  7. Beginning in 2018, CPCs shall include the following information in their Annual Reports:
    - a. the domestic laws and regulations in place to monitor and control their fisheries in order to fulfill the requirements of paragraphs 2-6 of this Recommendation;
    - b. any relevant research on fishing techniques that increase at-vessel survival and/or reduce post-release mortality; and
    - c. any research activities that contribute to future stock assessments (e.g. tagging, biological sampling, etc.).
  8. CPCs that do not meet their ICCAT data reporting requirements for North Atlantic shortfin mako shark, including the submission of observer data, shall be prohibited from retaining North Atlantic shortfin mako shark as of the year following the lack or incomplete reporting until such data have been received by the ICCAT Secretariat.

## **Phase 2**

9. As soon as possible, but no later than 2019, the SCRS shall present the Commission with:
  - a. Kobe II strategy matrix that reflects timeframe(s) for rebuilding of at least two mean generation times, and advises the Commission of the probability of ending overfishing and rebuilding that would be associated with annual catch limits between 0 t and 1000 t, at 100 t increments.
  - b. a spatial/temporal analysis of North Atlantic shortfin mako catches in order to identify areas with high interactions.
  - c. a review of available information on any biologically important areas (e.g. pupping grounds).
  - d. a review of the effectiveness of the use of circle hooks as a mitigation measure to reduce mortality. This review should include other shark species caught in association with ICCAT fisheries.
10. In 2019, the Commission shall review the effectiveness of Phase 1, including achieving the objectives of paragraph 5, and taking into consideration the new information provided by the SCRS in paragraph 9, shall establish a rebuilding program with a high probability of avoiding overfishing and rebuilding the stock to  $B_{MSY}$  within a timeframe that takes into account the biology of the stock.